

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) An access method for a multi-layer holographic recording medium including a multi-layer holographic recording layer formed by laminating a multitude of holographic recording layers in which the access method comprising:
forming data pages assigned the same page number, on a line that extends through the holographic recording layers, each of the data pages formed in a respective layer by angle-multiplex-recording interference fringes, using a common reference beam that extends, along the line, and a respective one of a plurality of object beams each object beam having a different incident angle to holographic recording layers;
forming a plurality of data blocks arranged two-dimensionally within each data page;
shift-multiplex-recording over an entire area in the respective holographic recording layers a plurality of the data pages, data pages formed by two dimensionally arranging a plurality of data blocks for recording data as interference fringes of a common reference beam on an optical path extending in the laminated holographic recording layers and a respective one of a plurality of object beams having different incident angles to respective holographic recording layers are angle multiplex recorded in recording areas on a line extending the optical path of the common reference beam at respective holographic recording layers, and the data pages being assigned page numbers from 1 to M; are shift-multiplex recorded over an entire area in the respective holographic recording layers, the access method for the multi-layer holographic recording medium comprising a process of impinging a laser beam for reproduction on the multi-layer holographic recording medium, the laser beam having the same wavelength and optical path as that of the

common reference beam used to form data pages assigned the same page number, to generate respective diffraction beams simultaneously from the respective holographic recording layers in the same direction as that of the respective object beams;

~~the laser beam has the same wavelength as that of the reference beam at the time of recording, and the incident angle thereof to the multi-layer holographic recording medium is also the same as that of the reference beams, then diffraction beams are generated in the respective holographic recording layer in the same direction as that of the object beams,~~

receiving the diffraction beams simultaneously by two-dimensional optical detectors at respective positions each of which is on a respective line extending along an optical axis of the respective object beam at the time of recording;

accessing the data blocks based on a layer number assigned to each of the holographic recording layers, ~~a number assigned to each the data page number of each of the data pages in which the same number is assigned to the same recording area on the line in each of the holographic recording layers, pages~~, and a number assigned to each of the data blocks in each of the data pages, and

by repeating a process of changing the page number to be accessed by rotating the multi-layer holographic recording medium, shifting to the recording area to be read out by rotating the multi-layer holographic recording medium and a process of receiving the diffraction beams by two-dimensional optical detectors at respective positions each of which is on lines extending the optical axis of the object beams at the time of recording incident on the respective holographic recording layers.

2. (Canceled)

3. (Previously Presented) The access method for a multi-layer holographic recording medium according to claim 1, wherein the number assigned to each of the data

blocks is identified by a row number and a column number assigned to each of the data blocks in each of the data pages.

4-5. (Canceled)

6. (Previously Presented) The access method for a multi-layer holographic recording medium according to claim 1, wherein the layer number assigned to each of the holographic recording layers is identified by a number assigned to each of two-dimensional optical detectors each of which is provided for a respective one of the holographic recording layers in order to detect the data pages which are angle-multiplex-recorded, and the two-dimensional optical detectors are constituted by an imaging device having the same two-dimensional pixel arrangement as the pixel arrangement of the data pages and the data pages are read out one row at a time by means of the imaging device.

7. (Previously Presented) The access method for a multi-layer holographic recording medium according to claim 1, comprising: a process of simultaneously reading a plurality of the data pages in each of the holographic recording layers on the optical path of the laser beam by the two-dimensional optical detectors.

8. (Previously Presented) The access method for a multi-layer holographic recording medium according to claim 6, comprising: a process of simultaneously reading a plurality of the data pages in each of the holographic recording layers on the optical path of the laser beam by the two-dimensional optical detectors.

9. (Canceled)

10. (Original) The access method for a multi-layer holographic recording medium according to claim 1, comprising: a process of successively reading a first data page to a last data page in the holographic recording layer; and a process of changing to the holographic recording layer to be read out.

11. (Canceled)

12. (Original) The access method for a multi-layer holographic recording medium according to claim 6, comprising: a process of successively reading a first data page to a last data page in the holographic recording layer; and a process of changing to the holographic recording layer to be read out.

13. (Previously Presented) The access method for a multi-layer holographic recording medium according to claim 1, wherein the layer number assigned to each of the holographic recording layers is identified by a number assigned to each of two-dimensional optical detectors each of which is provided for a respective one of the holographic recording layers in order to detect the data pages which are on the optical path of the laser beam.

14. (Previously Presented) The access method for a multi-layer holographic recording medium according to claim 3, wherein the layer number assigned to each of the holographic recording layers is identified by a number assigned to each of two-dimensional optical detectors each of which is provided for a respective one of the holographic recording layers in order to detect the data pages which are on the optical path of the laser beam.

15-16. (Canceled)

17. (Previously Presented) The access method for a multi-layer holographic recording medium according to claim 3, comprising: a process of simultaneously reading a plurality of the data pages in each of the holographic recording layers on the optical path of the laser beam by the two-dimensional optical detectors.

18-19. (Canceled)

20. (Original) The access method for a multi-layer holographic recording medium according to claim 3, comprising: a process of successively reading a first data page to a last data page in the holographic recording layer; and a process of changing to the holographic recording layer to be read out.